

**System and Method for Task Queue Management of  
Virtual Devices Using a Plurality of Processors**

**ABSTRACT**

A task queue manager manages the task queues  
5 corresponding to virtual devices. When a virtual device  
function is requested, the task queue manager determines  
whether an SPU is currently assigned to the virtual device  
task. If an SPU is already assigned, the request is queued  
in a task queue being read by the SPU. If an SPU has not  
10 been assigned, the task queue manager assigns one of the  
SPUs to the task queue. The queue manager assigns the task  
based upon which SPU is least busy as well as whether one  
of the SPUs recently performed the virtual device function.  
If an SPU recently performed the virtual device function,  
15 it is more likely that the code used to perform the  
function is still in the SPU's local memory and will not  
have to be retrieved from shared common memory using DMA  
operations.